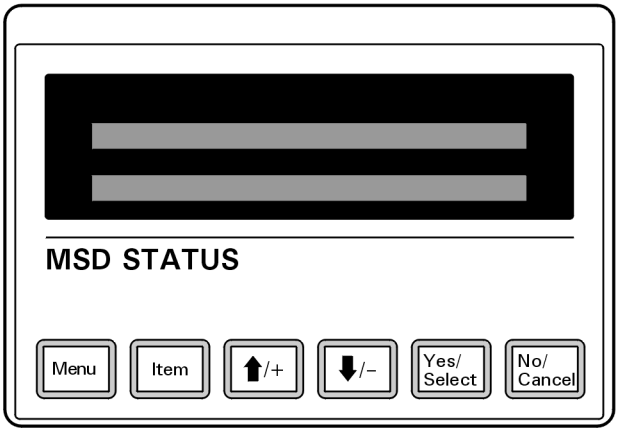
Agilent Technologies



5973N and 5973 inert Mass Selective Detector Local Control Panel (LCP)

Quick Reference

Using the Local Control Panel

The Local Control Panel (LCP) lets you determine the readiness and performance of the MSD without using the ChemStation.

With the 5973N or 5973 inert MSD, the ChemStation may be located anywhere on the site LAN (local area network) and so might not be near the instrument itself. And because the LCP communicates with the ChemStation via the LAN, you can access ChemStation software functions such as tuning and starting a run right from the MSD.

Note Only certain functions are available from the LCP; the ChemStation is the full-featured controller for most instrument control operations.

Modes of Operation

The LCP has two modes of operation: Status and Menu.

Status mode requires no interaction and simply displays the current status of the MSD instrument or its various communication connections. If you select **[Menu]** then **[No / Cancel]**, you will be returned to the Status mode.

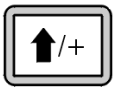
Menu mode allows you to query various aspects of the GC/MSD and to initiate some actions like running a method or sequence or preparing to vent the system.

To access a particular menu option:

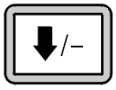
Press the Menu key until the desired menu appears.

Press the Item key until the desired menu item appears.

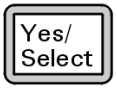
Use one or more of the following keys as appropriate to respond to prompts or select options:



Use the Up arrow key to increase the displayed value or to scroll up (such as in a message list).



Use the Down key to decrease the displayed value or to scroll down (such as in a message list).



Use the Yes / Select key to accept the current value.

Use the No / Cancel key to return to the Status mode.

After you make your selection or if you cycle through all available menus, the display automatically returns to Status mode.

Pressing **[Menu]** then **[No / Cancel]** will always display the Status mode.

LCP Status Messages

The following messages can be displayed on the Local Control Panel to help you quickly determine the status of the MSD system. If the LCP is currently in Menu mode, cycle through the menus to return to Status mode.

Note No messages will be displayed if an online instrument session is not currently running on the ChemStation.

Press Sideplate

A reminder during startup to press the MSD sideplate to ensure an adequate vacuum seal.

Loading OS

The operating system of the instrument controller is being initialized.

Loading MSD Firmware

The MSD's firmware is being initialized.

The following messages alternately appear on the LCP if the MSD does **NOT** complete its bootup sequence properly:

Server not Found
Check LAN Connection

Seeking Server
Bootp Query xxx

These messages indicate that the MSD has not received its unique IP address from the CAG Bootp Server. If the messages persist after you have logged onto your account on the ChemStation, consult the Troubleshooting section of the Software Installation manual.

ChemStation Loading <timestamp>

The MSD Productivity ChemStation software is starting up.

MS locked by <computer name>

MS parameters can only be changed from the ChemStation.

Executing <type>tune

A tuning procedure is in progress (type = QuickTune or Autotune).

Loading Method <method name>

Method parameters are being sent to the MSD.

Method Loaded <method name>

Method parameters have been sent to the MSD.

Run: <method> Acquiring <datafile>

A run is in progress; data is being acquired to the designated data file.

<method> Complete <timestamp>

The run and subsequent data processing are done. The same message appears even if the run was terminated prematurely.

Instrument Available <timestamp>

The MSD Productivity ChemStation software is not running.

To view system status during startup

1 The following messages are displayed on the Local Control Panel display during startup.

Press sideplate
Loading OS
Press sideplate
Loading MSD Firmware

2 Continue to press the sideplate of the MSD until the MSD Ready message appears. This helps the instrument to pump down more quickly.

LCP Menus

To access a particular menu option, press **[Menu]** until the desired menu appears, then press **[Item]** until the desired menu item appears.

Note Many menu items, especially on the ChemStation, MS Parameters, and Maintenance menus, have no effect when the instrument is acquiring data.

ChemStation Menu

Action	Description
Run Method	Displays the current method name and starts an analysis.
Run Sequence	Displays the current sequence and starts a sequence.
Run Current Tune	Displays the current tune file and starts an autotune (EI mode only, CI tune must be started from the ChemStation).
# of messages	Displays the number of messages and the text of the most recent message. Use the arrow keys to scroll through previous messages (up to 20).
Release ChemStation	Disassociates the ChemStation from the MSD.
Connection status	Displays the LAN connection status for the MSD. Remote = connected to a ChemStation online session Local = not connected to a ChemStation online session
Name of instrument	Displays the name of the instrument if connected to a ChemStation online session

Maintenance Menu

Action	Description
Prepare to vent	Reminds you to shut down the GC then vents the instrument when **[Yes]** is pressed.
Pump down	Initiates a pumpdown sequence.

MS Parameters Menu

Action	Description
Turbo pump speed	Displays the turbo pump speed
Pump status	Displays the diffusion pump status (on/off)
Ion source temp, °C	Displays and sets the ion source temperature
Mass filter temp, °C	Displays and sets the mass filter temperature
Electron multiplier	Displays and sets the EM voltage
Electron energy, eV	Displays and sets the electron energy (eV)
Emission current, µA	Displays and sets the emission current (µA)

Note MS parameters can't be set from the LCP while an online session is running on the ChemStation.

Network Menu

Action	Description
MSD IP	Displays the IP address for the MSD.
Gateway IP	Displays the gateway IP address for the MSD.
IP ChemStation	Displays the IP address for the ChemStation.
MAC MS controller	Displays the address of the LAN/MS control card.
Ping ChemStation	Checks communication with the ChemStation.
Ping gateway	Checks communication with the gateway.
IP GC	Displays the IP address for the GC.
Ping GC	Checks communication with the GC.

Version Menu

Action	Description
Control firmware	Displays the MSD firmware revision.
Operating system	Displays the MSD operating system revision.
Front panel	Displays the revision of the local control panel (LCP).

Controller Menu

Action	Description
Self-test, short	Initiates a short version of the self-test (will fail if an online ChemStation is running).
Self-test, long	Initiates a comprehensive self- test (will fail if an online ChemStation is running).
Reboot controller	Starts the LAN/MS control card.
Display diagnostics	Initiates a diagnostic test of the two line display.
HTTP check	Checks the status of the HTTP server.

LCP Tasks

To query system status

1 Make sure that an online session is running on the ChemStation.

2 Press **[Menu]** on the Local Control Panel (LCP) until the ChemStation menu appears.

3 Press **[Item]** on the LCP until the Messages item appears. This item displays the total number of messages and the text of the most recent message.

4 Use the arrow keys to scroll through previous messages. Up to 20 messages can be displayed.

Note No messages will be displayed if an online instrument session is not currently running on the ChemStation.

To start an autotune

1 Make sure that an online session is running on the ChemStation.

2 Press **[Menu]** on the Local Control Panel (LCP) until the ChemStation menu appears.

3 Press **[Item]** on the LCP until the Run Tune item appears. After a few seconds, the name of the current tune file is displayed.

4 Press **[Yes]**.

Note The autotune will not be performed if an online instrument session is not currently running on the ChemStation.

To start a run

1 Make sure that an online session is running on the ChemStation.

2 If a run is already in progress, wait until it is done or stop it from the ChemStation. If you are not sure, look for the "Run:<method>" message as described in To query instrument status.

3 Press **[Menu]** on the Local Control Panel (LCP) until the ChemStation menu appears.

4 Press **[Item]** on the LCP to display the Run Method item. After a few seconds, the name of the current method is displayed.

5 Press **[Yes]**.

- ☐ If automatic injection is selected in the method, the sample is injected when the GC temperatures are stable.
- ☐ If manual injection is selected in the method, wait until the Not Ready light on the GC goes off, then inject the sample and press **[Start]** on the GC.

Note The run will not start if an online instrument session is not currently running on the ChemStation. The current data file name should have a number in it (e.g., mydata001.d) to prevent subsequent overwrites. The number in the file will be incremented for the next injection.

To start a sequence

1 Make sure that an online session is running on the ChemStation.

2 If a run is already in progress, wait until it is done or stop it from the ChemStation. If you are not sure, look for the "In Run" message as described in "To query system status."

3 Press **[Menu]** on the Local Control Panel (LCP) until the ChemStation menu appears.

4 Press **[Item]** on the LCP until the Run Sequence item appears. After a few seconds, the name of the current sequence is displayed.

5 Press **[Yes]** to start the current sequence.

Note The sequence will not start if an online instrument session is not currently running on the ChemStation.

To prepare to vent the instrument

1 Press **[Menu]** on the Local Control Panel (LCP) until the Maintenance menu appears.

2 Press **[Item]** on the LCP to display the Prepare to vent item. You are prompted to turn off the GC. Refer to the 5973N or 5973 inert Hardware Manual for complete instructions on venting the MSD.

3 After you have turned off the GC as described in the 5973N or 5973 inert Hardware Manual, press **[Yes]** on the Local Control Panel on the MSD to vent the instrument.

Note You cannot initiate the vent procedure when an online session is running on the ChemStation. Either exit the online session first, or disassociate the instrument from the ChemStation using the Release ChemStation item on the Controller menu on the LCP.

To pump down the instrument

1 Press **[Menu]** on the Local Control Panel (LCP) until the Maintenance menu appears.

2 Press **[Item]** on the LCP to display the Pumpdown item.

3 Press **[Yes]** on the Local Control Panel on the MSD to pump down the instrument.

Note You cannot initiate the pumpdown procedure when an online session is running on the ChemStation. Either exit the online session first, or disassociate the instrument from the ChemStation using the Release ChemStation item on the Controller menu on the LCP.

To query network status

1 Press **[Menu]** on the Local Control Panel (LCP) until the Network menu appears.

2 Press **[Item]** on the LCP repeatedly to scroll through the various network connections.

- If an online session is running on the ChemStation, the message “the instrument is remote” is displayed along with the name of the instrument.
- If no online session is running, the message “the instrument is local” is displayed.
- You can view the IP addresses of the MSD, the GC, and the gateway. The IP address of the ChemStation will only be reported if an online session is running on the ChemStation.
- You can verify communication with the GC, the ChemStation, and the gateway with the Ping menu items. The ChemStation will appear not to be connected if no online ChemStation session is running.

To reboot the MSD

Use this procedure to restart the MSD; do not use the on/off switch on the MSD unless specifically instructed to do so in a maintenance procedure.

1 Press **[Menu]** on the Local Control Panel (LCP) until the Controller menu appears.

2 Press **[Item]** on the LCP until the Release ChemStation item appears.

3 Press **[Yes]**.

4 Press **[Menu]** on the LCP until the Controller menu appears.

5 Press **[Item]** on the LCP until the Reboot controller item appears.

6 Press **[Yes]**.

Agilent Technologies

Document History

7/03

Printed on recycled paper

Copyright © 2003
Agilent Technologies
Printed in U.S.A. 7/03